

CLAIMS

1. An electric double layer capacitor comprising an element formed by disposing a separator between a positive electrode and a negative electrode made of 5 carbonaceous electrodes, and a non-aqueous electrolyte impregnated to the element, wherein said separator comprises a sheet having a thickness of from 10 to 100 μm and a porosity of from 50 to 90%, and a netted spacer having a thickness of from 10 to 80 μm , a numerical 10 aperture of from 30 to 80% and an opening of from 50 to 350 mesh, laminated one on the other.

2. The electric double layer capacitor according to Claim 1, wherein the netted spacer is a net made of fibers of a polyester, a polyimide, a fluorine-containing 15 polyolefin or a polyphenylene sulfide.

3. The electric double layer capacitor according to ~~1 or 2~~ Claim 1 or 2, wherein the netted spacer is a net made of fibers having a fiber diameter of from 10 to 80 μm .

4. An electric double layer capacitor comprising an 20 element formed by disposing a separator between a positive electrode and a negative electrode made of carbonaceous electrodes, and a non-aqueous electrolyte impregnated to the element, wherein said separator comprises a sheet having a thickness of from 10 to 100 μm and a porosity of from 50 to 90%, and a spacer layer 25 formed of particles having an average particle size of from 0.1 to 20 μm , and having a thickness of from 10 to

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80 μm and a porosity of from 50 to 85%, laminated one on the other.

5. The electric double layer capacitor according to

Claim 1, ~~3 or P~~, wherein the sheet is made of
5 cellulose paper.

6. The electric double layer capacitor according to
Claim 5, wherein the cellulose paper is paper prepared to
contain at least 50 wt% of fibers obtained by beating
regenerated cellulose fibers.

10 7. The electric double layer capacitor according to

Claim 1, ~~2, 3, 4, 5 or 6~~, wherein the carbonaceous electrodes comprise a carbon material having a specific surface area of 100 to 2500 m^2/g and an organic binder.

8. The electric double layer capacitor according to

16 Claim 1, ~~2, 3, 4, 5, 6 or 7~~, wherein the non-aqueous
electrolyte comprises a solute which is a salt comprising
a quaternary onium cation represented by $R^1R^2R^3R^4N^+$ or
 $R^1R^2R^3R^4P^+$, wherein each of R^1 , R^2 , R^3 and R^4 which are
independent of one another, is a C_{1-6} alkyl group, and an
anion of BF_4^- , PF_6^- , $CF_3SO_3^-$, AsF_6^- , $N(SO_2CF_3)_2^-$ or ClO_4^- , and
a solvent which is at least one member selected from the
group consisting of propylene carbonate, ethylene
carbonate, dimethyl carbonate, diethyl carbonate,
methylethyl carbonate, acetonitrile, sulfolane and
25 methylsulfolane.